

LOS ANGELES COUNTY FISH AND GAME COMMISSION

GRANT APPLICATION TITLE PAGE

TITLE OF PROJECT/PROGRAM Water Temperature Profile: LA River ■

NAME OF ORGANIZATION RCD Santa Monica Mountains

[As it appears on (501) (c) (3) IRS Letter]

ADDRESS 540 S Topanga Boulevard

CITY Topanga STATE CA ZIP CODE 90290

TELEPHONE NUMBER 818.597.8627 FAX NUMBER 818.597.8630

AMOUNT REQUESTED \$2870

BOARD CHAIRPERSON Richard Brody

EXECUTIVE DIRECTOR Clark Stevens

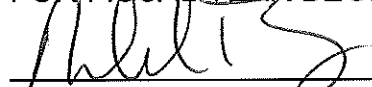
CONTACT PERSON Jennifer Mongolo

TITLE Conservation Biologist

TELEPHONE NUMBER(S) 310-488-6381

AUDITED TOTAL INCOME 122894 AUDITED TOTAL EXPENSES 1126974

FOR FISCAL YEAR BEGINNING 2013 AND ENDING 2014



SIGNATURE OF BOARD CHAIRPERSON

3/23/16

DATE

Note to Applicant: Please complete this title page and attach all grant application materials prior to submission.

One Page Project Summary

It is the goal of this study to capture a detailed thermal profile of the entire Los Angeles River watershed to better understand one of the major limiting factors for freshwater fish in the basin– temperature. In order to accomplish this, we are proposing to deploy 33 temperature loggers throughout the watershed, in areas where both native and non-native fish species are known to occur. A suite of biotic and abiotic factors that limit the distribution of native fishes in the Los Angeles River watershed. This initial work hopes to characterize one of these factors (water temperature) in areas where native species are known to occur and have been historically extirpated, as well as throughout other reaches to document current conditions and identify opportunities for restoration.

The Los Angeles River is headed for an unprecedented restoration effort. Our interests are in how the ichthyofauna of the entire Los Angeles River watershed will respond to future restoration actions. Currently native species only reside in the upper reaches of the watershed, and this community includes Arroyo chub (*G. orcutti*), Santa Ana speckled dace (*R. oculus* ssp.), Santa Ana sucker (*C. santanae*), and rainbow trout (*O. mykiss*). However numerous invasive fish species are found throughout the watershed and only invasive species make up the ichthyofauna of the river reaches that will undergo major restoration efforts.

There are a number of factors that have contributed to the current distribution of fish in the Los Angeles River watershed. These include habitat alteration, pollution, movement barriers, and storm water inputs. Despite these factors, and even though a majority of the lower river has been channelized there are still areas that provide, or could provide, suitable fish habitat (i.e. Glendale Narrows). Determining if the current temperature profiles in the lower reaches of the Los Angeles River are suitable for native fishes is an important first step for any proposed restoration effort. If temperatures are in fact suitable for native species, then future efforts can focus on improving habitat quality and determining how other abiotic factors may be limiting native species distribution. If temperatures in the river are not suitable for native species, as we suspect, future restoration efforts should be developed with a focus on improving the temperature profile of the river for native fishes.

Background on Applicant's Organization

Purpose and goals:

The Resource Conservation District of the Santa Monica Mountains (RCDSMM) has proudly served the local community with its programs in watershed management, restoration, research and education for over 50 years. The RCDSMM has planned and implemented riparian and wetland restoration projects, conducted monitoring for various sensitive habitats and species, worked toward the recovery of endangered fish populations, implemented habitat creation and enhancement, and planned interpretive design projects. We focus on the following in our projects and activities: Restoring native habitat and monitoring endangered species, Providing environmental education to local schools, Promoting water conservation and improving water quality, Collaborating with local, state and federal and NGO partners, Offering a variety of volunteer opportunities.

Brief summary of current activities:

The RCDSMM has collaborated with Friends of the Los Angeles River and University California Extension since 2008 on the LA River Fish Study to characterize current fish populations. Over 12 species of fish were documented in the Elysian Valley reach from the 134 Fwy down to the Riverside/Figueroa Bridge. The study has been expanded in recent years to include an additional site at Long Beach, and opportunities for anglers to participate in data collection. In 2013, the RCDSMM started the citizen science project 'Fish of the Los Angeles River' to reach out to and gather species catch information from the LA River angling community.

Geographic area served:

The study area includes the main stem and major tributaries of the Los Angeles River watershed, from its headwaters in the Angeles Forest and western San Fernando Valley, to the estuary in Long Beach (Appendix 1). For comparison purposes, we have divided the watershed into six zones based on 1) areas where native aquatic species are still found; 2) soft bottom reaches of the river where it might be possible to restore native aquatic species; and, 3) concrete reaches of the river. Table 2 shows the total number of temperature loggers we propose to deploy within each zone.

Grant Application
Page 4

Major sources and dollar amounts of corporate, foundation and government support during current and past fiscal year:

Friends of the Los Angeles River will fund part of the study. Although we have received grant funding for our steelhead lifecycle monitoring in the Santa Monica Mountains, no other funding has been acquired for Water Temperature Profile: LA River. Trout Unlimited has contributed the only cash funding of \$5,000 to allow RCDSMM staff to organize required permits, train and coordinate citizen science volunteers who will upload the data monthly, and to coordinate data management and analysis. A wide variety of community groups and local agencies are contributing time and additional equipment.

History of all grants received from the Los Angeles County Fish and Game Commission:

January 2012 Malibu Water Quality Probe Maintenance \$3,977
March 2012 Laptop for Wildlife Research \$2,500
March 2012 Microscopes for Marine Science Program \$2,730
April, 2013 Underwater Ultrasound DIDSON Camera Equipment \$2,000
January 2014 Dive Equipment for Research Monitoring \$5,135
January 2014 Restoration Tools \$1,685
May 2015 Malibu Creek Sonde Replacement \$5,451

Project Information

Statement of justification of need:

This project is to be driven by community volunteer citizen scientists who visit sites and collect data, coordinated by the RCDSMM. The RCDSMM and other partners will also contribute some equipment to the project such as remote temperature loggers or 'HOBOS', water quality equipment, and more. However, additional equipment is needed in order to supply volunteers with the tools they need to carry out the project activities.

Statement of purpose and goals:

It is the goal of this study to capture a detailed thermal profile of the entire Los Angeles River watershed to better understand one of the major limiting factors for freshwater fish in the basin– temperature. In order to accomplish this, we are proposing to deploy 33 temperature loggers throughout the watershed, in areas where both native and non-native fish species are known to occur. Phase 1 of the project is set to take place between April and October 2016, and likely to be extended for continued monitoring if additional funding can be secured.

Action plan to meet objectives:

Coordinated by the RCDSMM, UC Cooperative Extension and CSULA, volunteers, land managers, and college students will install continuously recording thermometers (Onset HOBO Tidbit v2 temperature data loggers) in approximately 33 locations throughout the Los Angeles River watershed from April through October 2016 according to the Summer Water Temperature Protocol. Each location will be visited monthly to download the recorded data, ensure logger is secure, and photograph site conditions. Downloaded data will be collected, organized and analyzed by a student intern. Sites will be selected to reflect a subset of canopy cover, substrate, habitat type, and depth conditions both in known native fish refugia as well as in locations outside of the current distribution of native fish.

the first of these is the fact that the
the second is the fact that the
the third is the fact that the

the fourth is the fact that the
the fifth is the fact that the
the sixth is the fact that the
the seventh is the fact that the
the eighth is the fact that the
the ninth is the fact that the
the tenth is the fact that the

the eleventh is the fact that the

the twelfth is the fact that the
the thirteenth is the fact that the
the fourteenth is the fact that the
the fifteenth is the fact that the
the sixteenth is the fact that the
the seventeenth is the fact that the
the eighteenth is the fact that the
the nineteenth is the fact that the
the twentieth is the fact that the

Statement of how the objectives advance the propagation and protection of fish and wildlife:

Historically, the Los Angeles River provided extensive freshwater habitat to a number of native southern California fishes, and other aquatic wildlife. Many of these fish species are still present in the system, especially in upper and headwater reaches of the watershed. They are joined today by non-native fish populations, some more tolerant of the identified water quality issues particularly in lower reaches (Appendix 2). With restoration planned in the River's near future, it is imperative to gather scientific data on the quality and quantity of currently available aquatic habitat, and high-potential areas for habitat rehabilitation. Water temperature, which can be a critical threshold for native fish viability, is not well recorded in many areas of the LA River. This project seeks to fill this data gap and provide information on how water temperature could support or inhibit native fish restoration, and what actions could be taken, where, to increase native fish habitat on the LA River.

Project budget and timetable:

10 temperature recording 'HOBOS' (\$140 each)	\$1,400.00
2 HOBO data transfer shuttles (\$260 each)	\$ 520.00
3 Waterproof cameras (\$200 each)	\$ 600.00
1 Hand-held GPS unit	\$ 350.00
TOTAL BUDGET:	\$2,870.00

Summer 2016: Project coordination and inception. Summer - Fall 2016: Project data collection. Winter 2016 data analysis, reporting, and year 2 planning.

Sources of other support for project:

This project has an extensive list of collaborating agencies and volunteers to monitor project sites and collect field data (Appendix 3). This volunteer support is the greatest contribution to the project. The RCDSMM and staff is providing project management and some field equipment. Trout Unlimited is providing \$5,000 to fund limited staff time.

Current status of project:

The RCDSMM has drafted a project design and shared the proposal with the Los Angeles River Aquatic Biodiversity Work Group which includes representatives from the Watershed Council, CA State LA, USGS, US Army Corps of Engineers, Heal the Bay, Los Angeles County Flood Control, and US Fish and Wildlife Service. The RCDSMM is currently applying for the required permits and anticipating to start work in April 2016.

Cash flow analysis of the expenditure of project funds:

Equipment would be purchased as soon as funds are available.

Proposed method of evaluating results:

While temperature loggers will be removed by October 2016, data will be retrieved and entered into a data base on a monthly basis. This will allow for on-going data analysis, QA/QC, and adaptive management. All data will be compiled per site to develop a longitudinal temperature profile of the river. Data analysis will include but not be limited to proportion of time at each temperature, comparison graphing, etc. Final results will be included in a project report.

Plans for funding on-going project (if applicable):

With this funding for equipment, the project is ready to implement in-full April 2016.

Progress reports (bi-yearly or upon completion, whichever occurs first):

Within 1 year of receiving funding, the RCDSMM will provide a progress report to LACFGC to describe project outcomes to date.

Please Attach the Following Supporting Documents:

- Description of Organizational Structure or Organizational Chart
- Copy of the Latest IRS Determination Letter of Tax Exempt Status under Section 501(c) (3)
- Most Recent Audited Financial Statement
- Most Recent IRS Form 990

ATTACHMENT A

CALIFORNIA FISH AND GAME CODE

§ 13103. Expenditures from fish and wildlife propagation fund; purposes

Expenditures from the fish and wildlife propagation fund of any county may be made only for the following purposes:

- (a) Public education relating to the scientific principles of fish and wildlife conservation, consisting of supervised formal instruction carried out pursuant to a planned curriculum and aids to education such as literature, audio and video recordings, training models, and nature study facilities.
- (b) Temporary emergency treatment and care of injured or orphaned wildlife.
- (c) Temporary treatment and care of wildlife confiscated by the department as evidence.
- (d) Breeding, raising, purchasing, or releasing fish or wildlife which are to be released upon approval of the department pursuant to Sections 6400 and 6401 onto land or into waters of local, state or federal agencies or onto land or into waters open to the public.
- (e) Improvement of fish and wildlife habitat, including, but not limited to, construction of fish screens, weirs, and ladders; drainage or other watershed improvements; gravel and rock removal or placement; construction of irrigation and water distribution systems; earthwork and grading fencing; planting trees and other vegetation management; and removal of barriers to the migration of fish and wildlife.
- (f) Construction, maintenance, and operation of public hatchery facilities.
- (g) Purchase and maintain materials, supplies, or equipment for either the department's ownership and use or the department's use in the normal performance of the department's responsibilities.
- (h) Predator control actions for the benefit of fish or wildlife following certification in writing by the department that the proposed actions will significantly benefit a particular wildlife species.

APPENDIX B - FISH DATA

Table 1. Current list of Fish species of the Los Angeles River 2016

Common name	Scientific name	Location
NATIVE SPECIES		
Arroyo chub	<i>Gila orcutti</i>	Upper watershed
Santa Ana speckled dace	<i>Rhinichthys osculus</i> ssp.	Upper watershed
Santa Ana sucker	<i>Catostomus santanae</i>	Upper watershed
rainbow trout	<i>Onchorhynchus mykiss</i>	Upper watershed
California killifish	<i>Fundulus parvipinnis</i>	Lower river end of concrete Long Beach
Northern anchovy	<i>Engraulis mordax</i>	Lower river end of concrete Long Beach
Stripped mullet	<i>Mugil cephalus</i>	Lower river end of concrete Long Beach
Topsmelt	<i>Atherinops affinis</i>	Lower river end of concrete Long Beach
NON-NATIVE SPECIES		
Amazon sailfin catfish	<i>Pteroplichthys pardalis</i>	Glendale narrows, expected in concrete area
Black bullhead catfish	<i>Ameiurus melas</i>	
Carp	<i>Cyprinus carpio</i>	Entire channelized reach
Fathead minnow	<i>Pimephales promelas</i>	Glendale narrows, expected in concrete area
Gold shiner	<i>Notemigonus crysoleucas</i>	Sepulveda Dam area, expected in concrete area
Goldfish	<i>Carassius auratus</i>	Entire channelized reach
Green sunfish	<i>Lepomis cyanellus</i>	Entire channelized reach
Largemouth bass	<i>Micropterus salmoides</i>	Entire channelized reach
mosquitofish	<i>Gambusia affinis</i>	Sepulveda Dam area, expected in concrete area
Suckermouth catfish	<i>Hypostomus plecostomus</i>	Sepulveda Dam area, expected in concrete area
tilapia	<i>Oreochromis sp.</i>	Entire channelized reach

APPENDIX A - PROJECT SITE

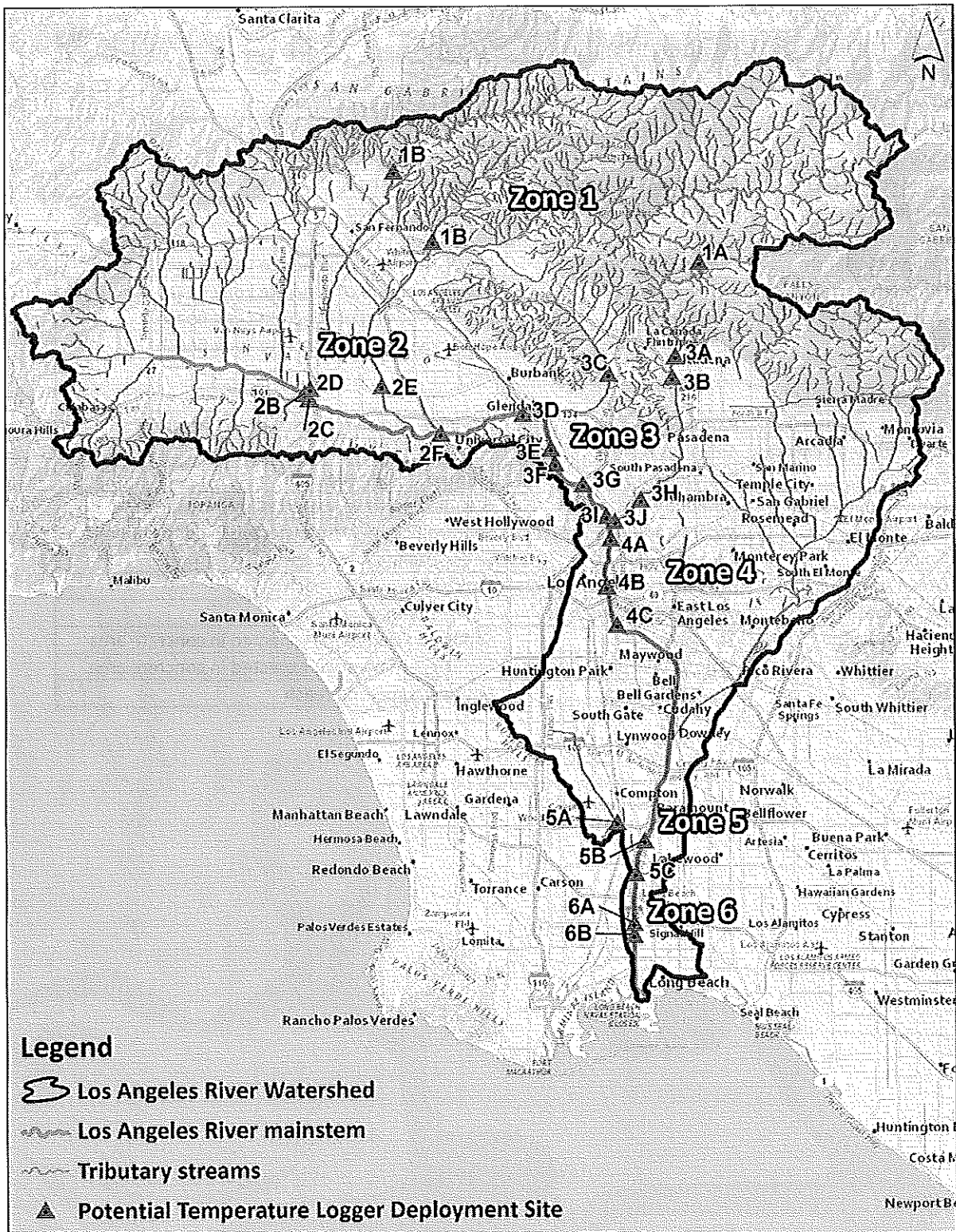


Figure 1. Study area map showing the six zones of the watershed and location of potential temperature logger deployment sites.

APPENDIX C - PROJECT PARTNERS

The ability to successfully implement this project will largely depend on establishing partnerships with local conservation/advocacy groups and the support and cooperation of permitting agencies.

Table 2. Summary of Partner by zone

Partner	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
Aquarium of the Pacific						x
Arroyo Seco Foundation	x	x				
Audubon Center at Debs Park		x				
CA Department of Parks and Recreation		x	x			
CA Science Center			x			x
Cal Naturalist					x	
California State University Los Angeles	x	x	x	x	x	x
City of Compton					x	
City of Glendale				x		
Council for Watershed Health	x	x	x	x	x	x
EPA	x	x	x	x	x	x
Friends of the LA River	x	x	x	x	x	x
Heal the Bay					x	
LA City River Office			x	x		
LA County Flood Control		x	x	x	x	x
LA County Museum of Natural History			x			
Mountains Recreation Conservation Authority		x	x			
RCD of the Santa Monica Mountains	x	x	x	x	x	x
Regional Water Quality Control Board	x	x	x	x	x	x
River Partners	x	x				
Trout Unlimited						x
UC Cooperative Extension	x	x	x	x	x	x
US Fish and Wildlife Service	x					
US Forest Service	x					



RESOURCE
CONSERVATION DISTRICT
OF THE
SANTA MONICA MOUNTAINS

818.597.8627 | phone
818.597.8630 | fax
info@rcdsmm.org

540 South Topanga Canyon Boulevard
Topanga, California 90290

BOARD OF DIRECTORS

Richard C. Brody
President

Steven Rosentsweig
Vice President

Nancy Helsley
Treasurer

Beth Burnam
Director

Mary Ellen Strote
Director

EXECUTIVE OFFICER
Clark Stevens

March 22, 2016

County of Los Angeles
Fish and Game Commission

Dear Commissioners,

In compliance with the request for supporting documents relevant to the fiscal status of the Resource Conservation District of the Santa Monica (RCDSMM), we provide the following information.

The RCDSMM, a subdivision of the State of California, is a local government special district organized under division 9 of the CA Public Resources Code.

Internal Revenue Code (IRC) Section 115 states that the gross income of a subdivision of a state is not taxable by the Federal government.

IRC Section 170(c)(1) states that contributions to subdivisions of a state are tax deductible as long as they are used for public purposes.

Therefore, the RCDSMM does not submit forms or pay federal income tax and contributions to the RCDSMM are tax deductible.

We appreciate the support of Supervisor Kuehl for our efforts to provide important resource management information that will help protect and preserve the Santa Monica Mountains.

Sincerely,


John Hendra
Operations Manager

